

REMARKS

This amendment is responsive to the Office Action of October 29, 2007. Reconsideration and allowance of claims 1-17 are requested.

The Office Action

Claims 1-8 were rejected under 35 U.S.C. § 102 (b) as anticipated by Weed et al. (U.S. Pat. No. 4,317,078).

Claims 1, 5 and 9 were rejected under 35 U.S.C. § 102 (b) as anticipated by Acker (U.S. Pat. No. 5,729,129).

The Amendments to the Specification are not Substantive

The amendments to the specification were made to add headings and place the text in more conventional US format. These amendments are not to be construed as limiting the claims, and they do not constitute new matter.

The Claims are not Anticipated by the References of Record

Claim 1

Applicants traverse this rejection. The rejection of claim 1 should be withdrawn because neither Weed nor Acker disclose all of the limitations as set forth in claim 1.

Claim 1 calls for a step of “iteratively repeating steps (a) to (c), including that of “narrowing the capture range by narrowing the field by means of the field generator.” The specification of the instant application defines “narrowing” at paragraph 0006 to include any adjustment with respect to at least one of a size, direction and orientation of the capture range to achieve an adjustment, shifting and/or moving of the capture range. Weed does not disclose all of these limitations as set forth in claim 1.

In particular, the Examiner asserts that Weed discloses the element of narrowing the capture range by narrowing the field by means of the field generator at column 8, lines 48-68, wherein the solenoid is described to move along the x-axis while the sensor remains stationary. The Examiner mistakenly concludes that as the

direction of the magnetic field is adjusted with respect to the sensor, the field is narrowed under the definition of paragraph 0006 of the instant application.

However, Applicants submit that this does not constitute narrowing under that definition. The Examiner should note that under the definition, the adjustment is 1) with respect to aspects of the capture range, and not the sensor; and 2) made in order to achieve an adjustment, shift and/or move of the capture range. Applicants respectfully submit that the cited portion of the reference fulfills neither of the twofold aspects of the definition. First, as the Examiner says in the instant office action, "direction of magnetic field with respect to sensor is adjusted." The definition requires that the adjustment be with respect to at least one of a size, direction and orientation of the capture range. The sensor is not an aspect of the capture range; much less a size, direction, or orientation of the capture range, and thus the first element is not satisfied.

Second, the purpose is a part of the definition: the adjustment is made "to achieve an adjustment, shifting and/or moving of the capture range". The motion in Weed is not made to adjust, shift, or move the capture range, but to locate the coordinates of the sensor. The motion has no other purpose. Applicants therefore respectfully submit that the cited reference of Weed does not disclose the element of narrowing the capture range. Applicants further submit that they have found no disclosure of this element in Weed.

In particular, the Examiner asserts that Weed discloses the element of iteration at column 8, lines 48-68. However, Applicants submit that this portion of Weed does not describe an iterative method. In the method of this cited portion of Weed, a sensor is oriented parallel to a z axis, and positioned below an x-y reference plane. The solenoid may be maneuvered physically or effectively, within this plane. This maneuvering evolves an induced voltage pattern which indicates the x reference coordinate of the sensor. This does not disclose an iterative method, much less suggest one. Even if one continues to read to the completion of the process described by the cited portion of the reference, one still finds no disclosure of an iterative method. The solenoid is rotated to displace the magnetic field by 90 degrees, the solenoid is maneuvered to evolve a second induced voltage pattern to indicate the y coordinate of the sensor, and the method is complete.

Applicants therefore respectfully submit that Weed discloses no iteration of the method, nor any reason for an iteration of the method. The motion of Weed is to read the other coordinate and is not an iteration in the sense of claim 1, because the iteration would never complete the second iteration. Applicants respectfully further submit that they have found no other disclosure of iteration in Weed.

As discussed above, Claim 1 calls for “narrowing the capture range by narrowing the field by means of the field generator,” and the specification of the instant application defines “narrowing.” Acker does not disclose all of these limitations as set forth in claim 1.

In particular, as above, “narrowing” includes elements of relativity and purpose in the adjustment. These elements are not disclosed by Acker. As above, under the definition of narrowing, the adjustment is 1) with respect to aspects of the capture range; and 2) made in order to achieve an adjustment, shift and/or move of the capture range. The cited portion of Acker does not disclose narrowing with respect to a size, direction, or orientation of the capture range. Rather, the cited portion discusses a method for maintaining the magnitudes of magnetic fields within a predetermined range. Much is made of the strength of the fields, their noise thresholds, mathematical solutions for isolating the individual strengths, and managing the strength of the fields. The disclosure simply does not speak of the capture range. Without any discussion of the capture range, the purpose element is also absent: the adjustments to the magnetic fields are not made to achieve an adjustment, shift or movement of the capture range, but to keep field strength within a preselected range, “whereupon the system calculates position and orientation.” As above, location, and not adjustment, is the purpose of the manipulation, and thus this is not “narrowing” as defined in the instant specification. Applicants therefore respectfully submit that the cited reference in Acker does not disclose the element of narrowing the capture range.

For at least the aforementioned reasons, neither Weed nor Acker anticipate the subject invention as recited in independent claim 1, or claims 2-4 and 10-14 which depend therefrom. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 5

The rejection of claim 5 should be withdrawn because neither Weed nor Acker disclose all of the limitations as set forth in claim 5.

Claim 5 has been amended to recite “[a] tracking system for tracking a sensor in a capture range in a field generated by a field generator, wherein the field generator iteratively adjusts at least one of a size, direction and orientation of the capture range to a level where the sensor is located with a progressively improved accuracy and resolution until a preselected accuracy and resolution are achieved. Weed does not disclose these limitations as set forth in amended claim 5.

In particular, the Examiner asserts that Weed discloses each of these elements at column 8, lines 48-68. However, Applicants have amended claim 5 to recite that the field generator is adapted to iteratively adjusts [...] until the preselected accuracy and resolution are achieved. Applicants submit that the cited portion of Weed does not disclose an iteratively adjusting to a level until preselected accuracy and resolution are achieved. This portion of Weed assumes that the accuracy and resolution are as they need to be, and do not discuss any adjustment for accuracy or resolution. Additionally, as above, this portion of Weed does not describe an iterative method. Moreover, this portion of Weed does not disclose that any particular standard of accuracy or resolution needs to be met.

Applicants believe that these amendments clarify the claimed subject matter to distinguish with greater accuracy and resolution over Weed. Applicants therefore respectfully submit that Weed does not anticipate Claim 5.

In addition to the amendments above, claim 5 has been amended to recite the capture range is focused, narrowed, and centered around a region of interest. Acker does not disclose this limitation as set forth in amended claim 5.

In particular, the Examiner asserts that Acker teaches each element of claim 5 in Fig. 4 and column 7, line 21 to column 8, line 39. However, Applicants have amended claim 5 to recite the ability of the capture range to be focused and centered around a region of interest. The cited portion of Acker does not disclose this. Rather, as discussed in more detail above, the cited portion discusses a method

for maintaining the magnitudes of magnetic fields within a predetermined range with no discussion in Acker of the capture range whatsoever.

Applicants therefore respectfully submit that the cited Acker reference does not disclose the element of capture range's ability to be focused and centered around a region of interest.

For at least the aforementioned reasons, neither Weed nor Acker anticipate the subject invention as recited in independent claim 5, or claims 6-8 and 15-17 which depend therefrom. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 9

The rejection of claim 9 should be withdrawn because Acker does not disclose all of the limitations as set forth in claim 9.

Claim 9 calls for iteratively narrowing the capture range and improving the resolution with which the location of the region of interest can be resolved. Neither Weed nor Acker disclose this concept. For at least the aforementioned reasons, it is submitted that neither Weed nor Acker anticipate claim 9. Accordingly, withdrawal of this rejection is respectfully requested.

New Claims 10-17

New claims 10-17 claim aspects of various preferred embodiments disclosed in the instant application.

CONCLUSION

For the reasons set forth above, it is submitted that all claims distinguish patentably over the references of record and meet all statutory requirements. An early allowance of claims 1-17 is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is requested to telephone Thomas Kocovsky at (216) 861-5582.

Respectfully submitted,

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